

partially-reflective element being arranged to partially reflect said electromagnetic radiation incident at a plurality of said positions.

8. (Amended) An apparatus as claimed in claim 1 including a chamber for containing said sample.

10. (Amended) An apparatus as claimed in claim 8 wherein said partially-reflective means is supported by or formed in a wall of the chamber.

11. (Amended) An apparatus as claimed in claim 1 wherein said partially-reflective means has substantially the same reflection coefficient at each said successive position.

12. (Amended) An apparatus as claimed in claim 1 wherein said source of electromagnetic radiation is a pulsed source.

13. (Amended) An apparatus as claimed in claim 1 wherein said source of electromagnetic radiation is a monochromatic source.

14. (Amended) An apparatus as claimed in claim 1 wherein said source of electromagnetic radiation is a wideband source.

15. (Amended) An apparatus as claimed in claim 1 wherein said source simultaneously produces electromagnetic radiation at a number of discrete wavelengths.

16. (Amended) An apparatus as claimed in claim 1 wherein said source of electromagnetic radiation produces electromagnetic radiation in the wavelength range from 2 nm to 10mm.

17. (Amended) An apparatus as claimed in claim 8 wherein said source is external to said chamber.

18. (Amended) An apparatus as claimed in claim 8 wherein said source is internal to said chamber.

19. (Amended) An apparatus as claimed in claim 8 wherein said source forms part of the chamber wall.

Please cancel claims 23 and 24.

Please add the following abstract:

ABSTRACT OF THE DISCLOSURE

An apparatus for measuring decay in intensity of electromagnetic radiation passing through a radiation-absorbent sample due to absorption of radiation by the sample is disclosed which includes a source of electromagnetic radiation having a wavelength within an absorption band of the sample and a plurality of partially-reflective specular surfaces which are spaced apart from each other along a predetermined path through the sample, each specular surface separating